

REMARKS

The present application was filed on July 21, 2003, with claims 1 through 18. Claims 1 through 18 are presently pending in the above-identified patent application.

In the outstanding Office Action, the Examiner rejected claims 1, 9, 15, 5 and 18 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. The Examiner rejected claims 1-8, 15, and 18 under 35 U.S.C. §102(e) as being anticipated by Ballard et al. (United States Publication Number 2003/0225693), rejected claims 9-11, 14, 16, and 17 under 35 U.S.C. §103(a) as being unpatentable over Ballard et al. in view of Kanevsky et al. (United States Patent Number 6,092,192), and 10 rejected claims 12 and 13 under 35 U.S.C. §103(a) as being unpatentable over Ballard et al. and Kanevsky et al., and further in view of Ritter (United States Patent Number 6,657,538).

Broadly, the present invention is directed to distorting biometrics from a person in order to increase personal privacy. In one aspect of the invention, a 15 transformation is used to transform biometrics into distorted biometrics, and the transformation uses a non-invertible function. In another aspect of the invention, the distorted biometrics are stored along with user identifiers. This helps maintain privacy for a user.

Section 101 Rejections

Claims 1, 9, 15, and 18 were rejected under 35 U.S.C. §101 because the 20 claimed invention is directed to non-statutory subject matter. In particular, the Examiner asserts that the claims are directed to a process that does nothing more than manipulate an abstract idea and that there is no practical application in the technical arts.

The Supreme Court has stated that the "[t]ransformation and reduction of 25 an article 'to a different state or thing' is the clue to patentability of a process claim." *Gottschalk v. Benson*, 409 U.S. 63, 70, 175 U.S.P.Q. (BNA) 676 (1972). In other words, claims that require some kind of transformation of subject matter, which has been held to include intangible subject matter, such as data or signals, that are representative of or constitute physical activity or objects have been held to comply with Section 101. See, 30 *for example*, *In re Warmerdam*, 31 U.S.P.Q.2d (BNA) 1754, 1759 n.5 (Fed. Cir. 1994) or

In re Schrader, 22 F.3d 290, 295, 30 U.S.P.Q.2d (BNA) 1455, 1459 n.12 (Fed. Cir. 1994).

Thus, as expressly set forth in each of the independent claims, the claimed methods produce a transformation of biometric data to a form that is suitable for authenticating an individual, yet does not reveal the digital representation of the biometric data. This transformation provides a useful, concrete and tangible result.

Furthermore, the claimed methods also provide a comparison result that is useful in an authentication process that confirms the identity of a person.

Applicants submit that each of the claims 1, 9, 15, and 18 are in full compliance with 35 U.S.C. §101, and accordingly, respectfully requests that the rejection under 35 U.S.C. §101 be withdrawn.

Independent Claims 1, 9, 15, 17 and 18

Independent claims 1, 15, and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Ballard et al. and claims 9 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard et al. in view of Kanevsky et al. Regarding claim 1, the Examiner asserts that Ballard discloses comparing, in response to a transaction, the distorted biometric with one or more stored distorted biometrics, so that the distorted biometric represents a user without revealing the digital representation of the one or more biometrics.

Applicants respectfully submit that independent claims 1, 9, 15, 17, and 18 are patentable over Ballard et al. and Kanevsky et al., alone or in combination. Applicants note that, in the text cited by the Examiner, Ballard teaches that “step 910 which comprises the step of capturing transactional data may include the steps of capturing biometric data and any and all additional data; *successively transforming the captured biometric data to a biometric signature, creating an encrypted compressed file identifying a location and time of the biometric data capturing; storing the tagged, encrypted compressed biometric signature file*; and initiating a transaction upon the capture of a biometric.” (Paragraph 138; emphasis added.)

First, Ballard does not disclose or suggest that the signature *does not reveal the digital representation of the biometric or is non-invertible*. In fact, Ballard teaches that, “in the fingerprint biometric subsystem, a capacitive apparatus may be

utilized to capture a biometric signature, preferably in the form of a *raw image* 605 of the fingerprint.” (Paragraph 127.) A raw image is necessary since Ballard teaches that the fingerprint search and matching algorithm relies on minutia based on a number of features (paragraph 77). (See also, FIG. 10; paragraphs 148 and 149.) Thus, Ballard
5 teaches that the digital representation of the biometric is revealed or is invertible.

Second, Ballard teaches that the signature file is encrypted and stored, but does **not** disclose or suggest that the signature file is *transmitted or is used in the identification step* (step 930).

Finally, since the signature is encrypted in step 910, and the encryption
10 keys for sending the transactional data (including the biometric data; see, paragraph 137) are not created until step 920, it would not be possible to utilize the encrypted signature file for the transmission and identification steps (steps 920 and 930, respectively).

Thus, Ballard et al. do not disclose or suggest comparing, in response to a transaction, the distorted biometric with one or more stored distorted biometrics, so that
15 the distorted biometric represents a user without revealing the digital representation of the one or more biometrics, as required by independent claim 1, do not disclose or suggest wherein said one or more distorted biometrics were created using one or more transformations of a digital representation of one or more biometrics of a user, at least one of the transformations comprising one or more non-invertible functions; and
20 comparing the one or more requests with one or more of the records, as required by independent claims 9 and 15, do not disclose or suggest sending a user identifier and an associated digital representation of a user biometric to a remote computer that distorts the digital representation of the user biometric to a distorted biometric using one or more transformations, at least one of the transformations comprising one or more non-
25 invertible functions; and determining that the user identifier is associated with the distorted biometric and sending an acknowledgment to the financial company, as required by independent claim 17, and do not require sending a transaction request, a user identifier, and a distorted biometric determined using one or more transformations that transform a digital representation of one or more biometrics of a user to the distorted biometric, at least one of the transformations comprising at least one non-invertible
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function; and receiving an authorization for a transaction defined by the transaction request, as required by independent claim 18.

Additional Cited References

Ritter was also cited by the Examiner for its disclosure that the distorted biometric is cancelled by allowing a user to replace the distorted biometric with a second distorted biometric. Applicants note that Ritter is directed to a method for authenticating persons, wherein video information of certain body features associated with a user or a user group is recorded in a point of presence (POP), and such recorded video information is processed to derive biometric keys, which are stored in tables of a biometric server and in a SIM-card of the user. (See, Abstract.)

Thus, Ritter does not disclose or suggest comparing, in response to a transaction, the distorted biometric with one or more stored distorted biometrics, so that the distorted biometric represents a user without revealing the digital representation of the one or more biometrics, as required by independent claim 1, do not disclose or suggest wherein said one or more distorted biometrics were created using one or more transformations of a digital representation of one or more biometrics of a user, at least one of the transformations comprising one or more non-invertible functions; and comparing the one or more requests with one or more of the records, as required by independent claims 9 and 15, does not disclose or suggest sending a user identifier and an associated digital representation of a user biometric to a remote computer that distorts the digital representation of the user biometric to a distorted biometric using one or more transformations, at least one of the transformations comprising one or more non-invertible functions; and determining that the user identifier is associated with the distorted biometric and sending an acknowledgment to the financial company, as required by independent claim 17, and does not require sending a transaction request, a user identifier, and a distorted biometric determined using one or more transformations that transform a digital representation of one or more biometrics of a user to the distorted biometric, at least one of the transformations comprising at least one non-invertible function; and receiving an authorization for a transaction defined by the transaction request, as required by independent claim 18.

Consequently, Applicants respectfully submit that independent claims 1, 9, 15, 17, and 18 are patentable over Ballard et al., Kanevsky et al., and Ritter, alone or in combination.

Dependent Claims 2-8, 10-14 and 16

5 Dependent claims 2-8 were rejected under 35 U.S.C. §102(e) as being anticipated by Ballard et al., claims 10-11, 14, and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard et al. in view of Kanevsky et al., and claims 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard et al. and Kanevsky et al., and further in view of Ritter.

10 Claims 2-8, 10-14, and 16 are dependent on claims 1, 9, and 15, respectively, and are therefore patentably distinguished over Ballard et al., Kanevsky et al., and Ritter (alone or in any combination) because of their dependency from independent claims 1, 9, and 15 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

15 Conclusion

Applicants respectfully submit that the claims of record are patentable over the cited art. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below. The Examiner's 20 attention to this matter is appreciated.

Respectfully submitted,



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